

I. Claim Rejections under 35 U.S.C. § 102

Claims 1-3, 7 and 8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Odagawa (U.S. Patent No. 5,349,530).

Odagawa is directed to a direction detection device. See title. The device of Odagawa includes a GPS position measurement unit 101, a geomagnetic sensor 102, a memory unit 103, and a correction operation unit 104. The GPS position measurement unit 101 receives an electric waveform for position measurement emitted from a GPS satellite and generates first direction data D_1 . See col. 2, lines 41-44. Geomagnetic sensor 102 generates second direction data D_2 . The memory unit 103 stores first direction data D_{1B} and second direction data D_{2B} obtained at a previous measurement timing. See col. 2, lines 46-48. The correction operation unit 104 obtains a true magnetic circle D_{TC} from a first direction data D_{1B} and D_1 obtained at a previous and a current measurement timing and second direction data D_{2B} and D_2 obtained at a previous and a current measurement timing. The correction operation unit 104 then controls the geomagnetic sensor 102 using the true magnetic circle D_{TC} . See col. 2, lines 48-58.

However, based on the foregoing description, it is apparent that Odagawa does not anticipate the claimed invention. In particular, Odagawa is concerned with the generation of a true magnetic circle. After obtaining the coordinates of the true magnetic circle, the geomagnetic sensor can be corrected by calibrating geomagnetic data corresponding with the obtained coordinate information. See col. 5, lines 1-24. Odagawa is not at all concerned with the claimed directional sections as further discussed below.

Claim 1

Claim 1 recites “a directional section specifying unit that detects geomagnetism to specify a directional section of a vehicle.” The Examiner cites GPS position measurement unit 101 of Odagawa for teaching the claimed directional section specifying unit. As discussed above, the GPS position measurement unit 101 receives an electric waveform for position measurement emitted from a GPS satellite and generates first direction data D_1 . See col. 2, lines 41-44. However, there is no teaching or suggestion that GPS position measurement unit 101 specifies a directional section of a vehicle. As previously submitted, the directional section information includes information such as N, S, NW, NNW, etc as illustrated in, for example, Applicant’s Fig. 3. The determined true magnetic circle does not teach the claimed directional section.

Claim 1 further recites “a display directional section determining unit that determines a current display directional section in consideration of **historical information of the directional section** of the vehicle specified by the directional section specifying unit and **a previous display directional section**.” The Examiner cites correction operation unit 104 for teaching the claimed display directional section determining unit. The correction operation unit 104 obtains a true magnetic circle D_{TC} from a first direction data D_{1B} and D_1 obtained at a previous and a current measurement timing and second direction data D_{2B} and D_2 obtained at a previous and a current measurement timing. See col. 2, lines 48-53. The determining of a true magnetic circle D_{TC} is not determining a current display directional section which would be apparent to one of ordinary skill in the art.

Further, the information taken into account in determining a true magnetic circle (current display directional section as cited by the Examiner) is direction data which is not a previous magnetic circle (cited by the Examiner for teaching a display directional section). In particular, the direction data does not teach or suggest the display directional section (true magnetic circle) cited by the Examiner. Therefore, a current display directional section is not determined in consideration of a previous display directional section.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable.

Claim 2

Claim 2 recites “wherein the directional section specifying unit repeatedly detects geomagnetism and finds a mean value of the geomagnetism during a sampling period and specifies the directional section to which the mean value of the geomagnetism belongs, as the direction of the vehicle.” The Examiner asserts that Odagawa, col. 2, line 59 to col. 3, line 22, col. 4, line 35 to col. 5, line 23, teaches this aspect of the claims.

The respective column and lines cited by the Examiner describes the generation of geomagnetic data D_{GPS} and the generation of magnetic direction data D_{MAG} . A microprocessor stores geomagnetic data D_{GPS} and magnetic direction data D_{MAG} of a previous measurement timing and a current measurement timing and corrects a geomagnetic sensor to obtain more accurate direction data. Further, the respective column and lines cited by the Examiner describe the calculation of parameters for a magnetic circle.

However, there is no teaching or suggestion of finding a **mean value** of the geomagnetism during **a sampling period** and specifying the directional section **to which the mean value of the geomagnetism belongs** as recited in claim 2. Consequently, claim 2 and its dependent claims should be deemed allowable.

Claim 3

The Examiner cites col. 2, lines 35-58 for teaching the aspects of claim 3.

The respective column and lines cited by the Examiner disclose the GPS position measurement unit 101, the geomagnetic sensor 102, the memory unit 103, and the correction operation unit 104 as discussed above. However, there is no teaching or suggestion that when a **current directional section** of the vehicle specified by the directional section specifying unit **agrees with a previous directional section of the vehicle**, the display directional section determining unit **makes the current display directional section agree with the current directional section of the vehicle**, as recited in claim 3.

In particular, there is no teaching or suggestion in Odagawa that when a determined true magnetic circle (directional section as cited by the Examiner) agrees with a previous magnetic circle, that the correction operation unit 104 (display directional section determining unit as cited by the Examiner) makes a current **display** magnetic circle agree with a current magnetic circle. Consequently, claim 3 should be deemed allowable.

Claim 7

Claim 7 recites “wherein when the current directional section of the vehicle specified by the directional section specifying unit is different from the previous directional section of the

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vehicle, the display directional section determining unit **makes the current display directional section agree with the previous display directional section.**" The Examiner cites col. 2, line 35 to col. 3, line 17 and col. 5, lines 24-43 for teaching this aspect of the claim.

However, Odagawa does not teach or suggest this aspect of the claim. Further, it would appear to defeat the purpose of Odagawa of determining a true magnetic circle (current directional section as cited by the Examiner) if a determined true magnetic circle is made to agree with a previous magnetic circle. Consequently, Odagawa does not teach this aspect of the claim and claim 7 should be deemed allowable.

II. Claim Rejections under 35 U.S.C. § 103

Claims 4-6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Odagawa in view of Masumoto et al. (U.S. Patent No. 5,349,529). Claims 4-6 should be deemed allowable by virtue of their dependency to claims 1 and 2 for the reasons set forth above. Moreover, Masumoto does not cure the deficiencies of Odagawa.

III. Conclusion

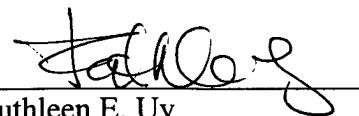
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Ruthleen E. Uy
Registration No. 51,361

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
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CUSTOMER NUMBER

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